Synopsis

on

Consumer Analysis of Readiness for Digital Payment: With Reference to Agra Region

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Section I-Introduction

1.1. Digital Payment

The term “Digital Payment” has achieved increasing significance in recent years (Ministry of Finance, 2016), The global payment systems have seen some big changes in the time period 2015 to 2017 because all the transaction in digital payments are being done online. It is an instant and a convenient way to make payments. The market revolves around consumer behavior, and preferences are provided to new participants in digital payments. There are many companies which are not related to the banking sector, but they have entered in this field and captured market of payments such as Airtel money, Jio Payment, Paytm and Freecharge etc. This phenomenon has also set up new consumer expectations like just pay to anyone, one click anytime, anywhere, etc. The cumulative effect of the above factors has a direct impact on the competitive advantage and value proposition of banks (Athanassiou and Mas-Guix, 2008).

Today, a vast majority of the global population has access to mobile handsets and is becoming familiar with the Internet (Girouard, 2006). Nowadays, the majority of the internet users have been accessing the internet through mobile handsets. Due to the entry of high-tech and low-budget smart phones, the mobile internet services have become kind of basic necessities. The technologies of these gadgets are very helpful in digital payment. Thus, the smartphone is enabling the new payment capabilities, which is revolutionizing digital payments. This is possible with various Mobile Applications (Apps). Below are the some of the popular e-payment applications.

- Paytm App
- Freecharge App
- Bhim App
- Jio Money App
- Aadhar Payment App

1.1.1 Classification of Payment Methods: We now provide a classification chart of various transaction payment methods. We have divided payments into two major payment methods. The first is 'Traditional Payment', and the second one is 'Digital payment'. (Refer Figure 1)

1.1.1.1 Traditional Payment: Traditional payment is a part of banking that deals with payments through cash, cheque or demand draft. These instruments are considered traditional payment methods because, for a long time, the traditional payment methods have been playing a very important role in the banking sector. Now, the consumers have changed with the time and technology. The consumers have accepted the new technology and are making use of digital payment and mobile payment with the help of payment applications.

1.1.1.2 Digital Payment: Digital payment is a way of payment which is made by credit card, debit card, Ru-pay card, smart card, digital wallet, etc. Payer and payee both use digital mode in digital payment to send and receive money. This process is completed without hard cash. All the transactions in digital payment are completed with the help of Internet or online. It is a fast and convenient way to make payments. Digital payments saves the consumers from long queues of banks.

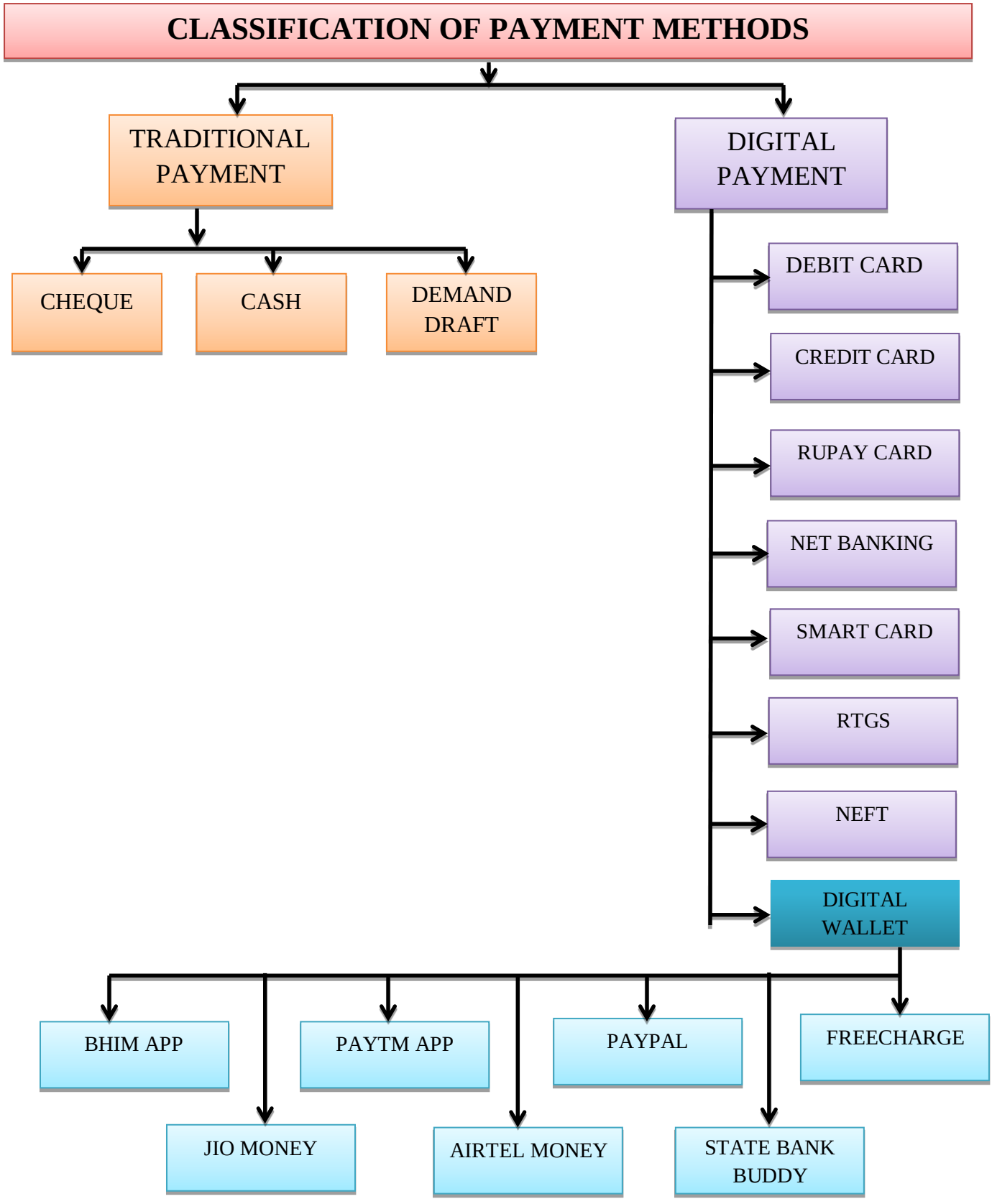

Figure 1: Classification of Payment Methods (Source: Researcher's own construction)

Traditional Payment

- **Cheque:** Cheque is an unconditional printed paper document and order to the banker to a particular person to pay the specific amount. The cheque can be classified as cross cheque, order cheque, bearer cheque, open cheque, ante-dated cheque and post-dated cheque. The cheque is mainly used to withdraw the money and transfer the fund from one account to another account.
- **Cash:** Cash is also known as money in the physical form. Cash is a legal tender or coin that is used to purchase goods or services. Before demonetization, cash played a predominant role in the whole market, especially banking sector. This is because when any consumer wants to purchase anything, including daily needs goods, then he/she needs cash.
- **Demand Draft:** Demand draft is a pre-paid negotiable instrument wherein the drawee bank undertakes to make payment in full when the instrument is presented by the payee for payment. Cheque and demand draft are continuously losing their place as negotiable instruments because of NEFT and RTGS mechanism.

Digital Payment

- **Debit Card:** A debit card is a plastic card that is issued to a cardholder for electronic access to her/his bank account. The card is used to withdraw money and to make purchases using money in the bank account. Since this plastic card is linked to a checking account (saving/current), it is also named as 'Checking Card'. There is no monthly bill for the debit card use because the user purchases from own money and not from a bank loan.
- **Credit Card:** Credit card is also a plastic card or payment card used to make payment for goods and services. First credit card was issued in United States of America in 1920 and was used by an automobile owner for filling fuel in his car. It reached to the public in the 1950s through the dinner-club. In 1958, Bank of America launched the first modern credit card the 'Bank Americard' in California, America. Bank gives the credit card to its account holder on the basis of a line of credit,

goodwill and fixes the credit limit. In others words, it can be said that bank gives loan to the account holder for a fixed amount.

- **Rupay Card:** Rupay card is an Indian domestic card. This is a combination of two words: first is "Rupees" and second is "Payment". It is an Indian version of debit/credit card. It was launched by National Payments Corporation India (NPCI) with the intention of integration of payment systems in the country.
- **Smart Card:** A smart card is a plastic card or chip card or a security token, and is used for various works. Smart card can be of various types such as driving license card, aadhar card, pan card, etc. Metro card is also a smart card and used on prepaid recharge system.
- **RTGS:** Real Time Gross Settlement (RTGS) is an electronic payment system that allows one person or an individual to transfer amount between two banks. These systems are maintained by Reserve Bank of India. It is one of the fastest money transfer internet banking service in India. The receiver bank has to credit the receipts account in 30 minutes only of receiving fund transfer message. There is no upper ceiling for RTGS transactions but the minimum amount to be remitted through RTGS is Rs. 2 lacs.
- **NEFT:** National Electronic Fund Transfer (NEFT) allows firms, companies, and individuals to transfer fund from one bank account to another bank account. The firms and companies use NEFT service because it is a time-saving and a safe method. It is allowed to net banking service users only and this system or service is also maintained by Reserve Bank of India. There is no mandate of minimum amount transfer in NEFT.

Digital Wallet

- **Bhim App:** Bhim (Bharat Interface for Money) is a Mobile Payment App., developed by NPCI and was launched on 30th December, 2016 on the occasion of Digi Dhan Mela at New Delhi. It was launched by the Honorable Prime Minister of India. It is linked with Unified Payment Interface (UPI). 27 major banks support Bhim Aadhar App. The application is available on Google Play Store,

According to Hindustan Times, 2017, the Bhim App has touched a new milestone in the world by registering 1.9 Cr. downloads in just four months from date of launch.

- **Pay Pal App:** Pay pal is a digital wallet or mobile wallet App and works like Paytm. This application is popular but not more than other applications like Paytm, Airtel money, Jio money, etc. Consumers can use this application very easily in study related work or commercial purpose.
- **Paytm App:** Paytm is a digital payment wallet App. This is a very popular App because it is very easy to use and the user can make payments very fast through this App such as electricity bill payment, movies tickets booking, water bill payment, purchases, on one touch.
- **Jio Money:** Jio money is a mobile wallet App. It was launched by Reliance Jio Infocomm Ltd. in 2016. This App helps the user in payment of digital bills such as electricity bills, water bills, gas bills, book movies tickets, etc. The user can also transfer money to bank account and from bank account to friends and family (Kumar, 2017)**.** Jio money app is very safe and secure platform for making digital payments on both physical and online stores.
- **Airtel Money:** Airtel Money is a mobile payment application launched by Airtel that allows the users to send and receive money and make payments in a very simple way. The Company has used an emotional tag line "Baat sirf paison ki nahi hai" to promote the application.
- **Freecharge:** Freecharge is an e-commerce website launched in September, 2015. This e-commerce website provides online facility to recharge prepaid and postpaid mobile phones, data cards, metro cards, utility bills payments for service providers, DTH recharge etc. The main benefit of Freecharge is that it provides a discount coupon or discount code to consumers for next recharge.
- **State Bank Buddy:** State Bank Buddy is a mobile wallet through which the user can simply send or ask money from any of his/her contacts even if he/she does not have a State Bank of India (SBI) account. The application was launched by Finance Minister of India, on 18th August 2015. Through this application, the user can pay utility bills, book movies tickets, flights, hotels, recharge DTH etc.

24x7 on the move. This application is available in 13 languages and the SBI Buddy Application collaborated with Accenture and Master Card.

Section II–Review of Literature

A review of literature was conducted to understand the broad concept of Digital Payment, its impact on consumer behavior and its implications on performance of the digital payment and mobile payment. Based on the literature review, a conceptual framework is proposed consisting of enablers and challenges of digital payment.

2.1 Factors relating to Enablers of Digital Payment

The first categorization of literature is done on the basis of consumer readiness for digital payment and classified as enablers of digital payment.

2.1.1 Perceived Mobility

The literature on perceived mobility includes concepts, models, polices, theories, etc. on digital payment. Authors have also described how to benefit from perceived mobility and types of changes in digital payment adoption. Government has created norms for more secure digital payment so the consumers can adopt digital payment without any fear (Gupta, 2008). Research shows that internet banking increases consumer satisfaction (Ghosh, 2017). The government has taken a step for cash less society and has made a policy for digital India and digital payment. Demonetization also appears to be a part of the policy of government to push customer for digital payment (Abrantes et al., 2013; Kaur, 2017). This will eventually increase the percentage of users using digital payment. Mobility factor is specific to mobile services or digital payment service (Amberg et al., 2003).

2.1.2 Positive Word of Mouth

Positive word of mouth is an important factor because we are part of the society and get affected from positive word of mouth directly or indirectly (Taddesse and Kidan, 2005; Carr, 2007; Kim et al., 2010; Al-Jabri and Sohil, 2012). Researchers conducted a study on 330 actual mobile banking users and found that relative advantage, observability and compatibility have positive impact on digital payment adoption. Positive

word of mouth also played a major role in digital payment adoption (Kim et al., 2010). According to Moody Analysis, the electronic payments usage promotes consumer confidence. Consumers that are happy with digital payment service influence others regarding usage of digital payment service or benefits (Zand, 2016). Various authors have discussed the relevant concepts and related factors of individual financial transparency for enabler of digital payment and readiness for digital payment (Kaur, 2017; Ghosh, 2017).

2.1.3 Technology Acceptance

Technology acceptance in context to digital payment is also an important factor that has been studied in previous research (Stalder, 1999). A study found that digital payment are very secure because when the 'Mondex card' smart card was launched in 1997 in Guelph, Ontario, consumer gave positive response for this service because this new technology was so easily accepted by consumer or general public (Soman, 2001). Consumers earlier used the traditional payment mechanisms such as cheque, cash, demand draft etc. and found them expensive and time-consuming method (Olga, 2003). Thus, the consumers have easily accepted the digital payment method because it is time saving, secure, privacy, easy to use. A study conducted in 2007 found that there are 225 million mobile handsets (Mallat, 2007) and 100 million are added every year and after few year more than 500 million people are expected to have own mobile hand set in India (MPFI, 2007) (Mas and Kumar, 2008). So, continuous increase in mobile users have facilitated acceptance of new technology and created the new revolution in banking sector (Schierz et al., 2009). Mobile payment is also known as M-paisa payment. It is very secure as it does not reveal the personal information (Kim et al., 2010). The smart money or digital payment have been successful in the countries like Philippines because of three major reasons: conducive market conditions, well-executed business strategy, early and strong support for a mobile payment service and new technology for the consumer (Wills, 2015). Mobile wallet is the best product of new technology because in present scenario the payment methods have changed very fast and large percentage of mobile users pay the utility bills through digital payment with the help of mobile phone (Jeevan, 2015; Rathore, 2016). The factors behind acceptance of new technology have been highlighted in a study (Zand, 2016) (Chuttur, 2009).

2.1.4 Perceived Ease of Use

Ease of operation is one of the recent factors studied in the literature related to digital payment. Some researchers have discussed the ease of operation in digital payment and how it is different from cash transaction. It is a positive factor in digital payment because it makes it easy to operate and is secure (Stalder, 1999; Soman, 2001). Consumer, and specially youth, have accepted the new technology for making payments because the youth wants to save time and use easy digital payment methods (Olga, 2003). Digital payment is not a new phenomenon in Countries like Ethiopia because of use of electronic payment in trades since 1970s in financial sector The first digital payment application launched there was Electronic Fund Transfer (EFT) (Taddessse and Kidan, 2005). According to authors, e-payments greatly increase payment efficiency and reduce the transaction cost and ease the operation of purchasing and making payments (Tiwari et al., 2006). The mobile payment and digital payment is gaining increasing acceptance in the society. This growth speed is possible with the help of technology (Carr, 2007; Gupta, 2008). Internet banking or digital payment has attracted the consumer because of security, time saving, cost saving, revenue growth, customer satisfaction and ease of use, etc. (Kim et al., 2010). An empirical study examining factors influencing the intention to use mobile payment revealed that strong predictors of the reason to use m-payment or digital payment are perceived ease of use and usefulness (Zand et al., 2016).

2.2 Challenges of Digital Payment

2.2.1 Lack of Security

Lack of security is a major hurdle in digital payment because the consumer wants secure and safe services for fund transfer or payment of utility bills Some forgery cases, confidential detail theft by IT experts, and leakage of important data and personal information have created fear in the minds of the consumers. So, many consumers or non-users do not prefer digital payment because of lack of security reason. Many authors have discussed security related problems in digital payment (Udo, 2001; Taddesse et al., 2005). One of the biggest challenges of digital payment identified is the need of multilateral security that is security needs of all the users of e-payment system (Stalder, 1999). The general security norms of any secure messaging system,

confidentially, integrity, non-repudiation and authentication should be guaranteed by the M-payment service provider (Misra and Wickamasinghe, 2004). A study identified security, complexity, premium pricing, perceived risk as barriers to adoption of digital payment (Mallat, 2007). The early adopters of digital payment have faced security issues and they have taken risks but the late adopters do not have to take the risk because of security measures adopted later by the companies (Khan et al., 2009; Kim et al., 2010)..

2.2.2 Lack of Trust

Trust is a very important factor regarding financial payments and many authors found out in their research that a high percentage of population does not use the digital payment app or service, because consumers do not have trust in this payment mode (Udo, 2001; Taddesse and Kidan, 2005). Many consumers do not trust digital payment or digital wallet because of the cybercrime with consumer credit card, debit card or digital wallet (Mallat, 2007). Government and service provider have also tried to come up with the awareness campaigns on digital payment, for general public (Gupta, 2008). Digital payment technology is very impressive for consumer, and the late adopters can easily use this because they are more confident and technology savvy and companies have build a trust (Khan, 2009; Kim et al., 2010). Consumer do not prefer just any payment app because they do not trust digital wallet. However, after demonetization, the consumer have started digital wallet using instead of cash (Ghosh, 2017). Some consumers do not like taking risks and are comfortable with cash, but after government policy and demonetization, they have starting using the digital wallet (Wushishi and Ogundiya, 2014).

2.2.3 Lack of Awareness

Lack of awareness is an important factor influencing digital payment because some companies that have provided this service for payment of utility bills, booking hotel, flight and movie tickets, mobile recharge, etc. have not promoted the application appropriately. There is lack of awareness regarding use of applications and benefit of applications to the consumer (Wushishi and Ogundiya, 2014). Many consumers want to use the digital payment app and participate in cashless economy and cash free India campaign, but the problem is that the consumer is not aware or familiar with digital wallet.

2.2.4 Cost of E-Payment:

Cost of e-payment is a highly challenging factor affecting adoption of digital payment. Several authors have shown that consumers perceive digital payment mode or service expensive as compared to cash payments because a digital payment or E-payments requires an internet, mobile or POS, etc. which increases the deployment cost (Soman, 2001). The cost of digital payment is higher than cash payment, because consumers have to pay extra charges for digital payment (Mallat, 2007). A study found that after demonetization, digital payment has touched a new milestone in payment area, but still consumers are facing issues such as lack of trust, lack of security, and the main problem of bearing extra charges on transactions. Some customers are not ready for this and it remains as a major challenge in digital payment (Wushishi et al., 2014; Kumudha et al., 2016).

2.3 Research Type

The third categorization of the literature review was done on the basis of the research methodology used by the authors, in studies related to digital payment. This will provide some insights on the nature of work done in this field.

2.3.1 Descriptive Research

Descriptive research includes survey and fact-finding information. The main purpose of descriptive research is description of the scenario/situation as it exists at present. It is providing precious information about the relevant characteristics and related to study. Several authors have used this types of research (Stalder, 1999; Soman, 2001; Udo, 2001; Olga, 2003; Taddesse and Kidan, 2005; Tiwari et al., 2006, Carr, 2007, Mas and Kumar, 2008; Gupta, 2008; Khan et al., 2009, Radcliffe, 2011, Al-Jabri and Sohail, 2012; Reddy, 2012; Teoh et al., 2013, Braga et al., 2013, Wills, 2015; Jeevan, 2015; Feinstein, 2015; Rathore, 2016; Zand, 2016; Ghosh, 2017; Wushishi and Ogundiya, 2014; Kumudha and Lakshmi, 2016).

2.3.2 Conceptual Research

Conceptual research is related to summary of the idea or theory. It is mainly used by thinkers and philosophers to develop new concepts or to restructure existing ones. The various researchers/authors who have used this type of research include (Stadler, 1999; Taddesse and Kidan, 2005; Schierz et al., 2009; Kim et al., 2010; Kaur, 2017).

2.3.3 Analytical Research

Analytical research uses already available facts or information by the researcher for analysis and critical evaluation of the material. Analytical research is primarily concerned with testing hypotheses and analyzing the facts or information already available. The research work done by authors using this approach include (Soman, 2001; Gupta, 2008; Khan, 2011, Teoh et al., 2013; Braga et al, 2014, Rathore, 2016; Zand, 2016; Ghosh, 2017).

2.3.4 Empirical Research

Empirical research refers to the research conducted to gain knowledge directly or indirectly, and verified by observation or experience. The research works done by the authors using this approach include (Schierz et al., 2009; Kim et al., 2010).

2.3.5 Exploratory Research

Exploratory research is the research used for problems that have not been studied very clearly, and the researcher conducting this type of research develops operational definitions, establishes priorities and improves the final research design. This research helps determine the best research design selection of subject and data collection. The authors who have used this research methodology in their research work include (Mallat, 2007; Mas and Kumar, 2008; Al-Jabri and Sohail, 2012).

Tabular Summary of Literature Review																		
CONTENT																		
S.NO	PAPER AUTHOR (YEAR)	TITLE	RESEARCH ISSUE	COUNTRY	ENABLERS				CHALLENGES				METHODOLOGY					MAJOR FINDING
					Perceived Mobility	Positive Word of Mouth	Technology Acceptance	Perceived Ease of Use	Lack of Security	Lack of Trust	Lack of Awareness	Cost of E-Payment	Description	Conceptual	Analytical	Empirical	Exploratory	
1	Stalder (1999)	Exploring Policy Issues of Electric Cash: The Mondex Case	Acceptance problem of Mondex Card	Canada			✓	✓	✓	✓			✓	✓				Mondex provides a technically advanced solution for a wide array of payment conditions.
2	Sonam (2001)	Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments	Analysis of the Role of Rehearsal and Immediacy of Payments	Hong Kong			✓	✓				✓	✓		✓			The role of budgeting on consumer spending decisions is driven by a retrospective construction of past expenses rather than a proactive, on-line computation, Consumers for routine purchases may rely more on a global retrospective evaluation as an input into pending spending decisions.
3	Udo (2001)	Privacy and Security Concerns as Major Barriers for E-Commerce: A Survey Study	Developing a consensus for lack of confidence, trust, Security issue and privacy are the major concerning issues for consumers	USA					✓	✓	✓		✓					(Factors in the descending of importance) Privacy, Security and Threats. Impersonation and foraged identity, children protection, email safety and censorship are the major concern. Keeping IT user concern is the future key.

4	Lustsik (2003)	E-banking in Estonia: Reasons and Benefits of the Rapid Growth	Author tries to identify the criteria for developing successful bank strategies and e-commerce	Estonia			✓	✓					✓					The paper demonstrates that e-banking is not a niche application to computer fans and innovative adopters, and a profound research is needed to map its consumer base and the impact of e-banking on the development of bank-customer relationships in the value creation process.
5	Wondwossen el al, (2005)	E-Payment: Challenges and Opportunities in Ethiopia	Reviewing literature of payment from African perspective • Review existing e-payment system in Ethiopia. • Investigate challenges to e-payment in Ethiopia (legal/regulatory, infrastructure, socio-culture).	Ethiopia		✓		✓	✓	✓			✓	✓				In Ethiopia ICT infrastructure like other African countries is not well developed. This is one reason that e-payment is not expanded in the country. The national ICT draft policy has also given great emphasis on the expansion of ICT infrastructure. Current effort done by the government to establish nationwide networks such as Worde Net and Revenue Net need also to be encouraged and expanded.
6	Tiwari et al, (2006)	Mobile Banking as Business Strategy: Impact of Mobile Technologies on Customer Behavior and Its Implications for Banks	Analysis of customer acceptance towards online, mobile banking	Turkey			✓	✓	✓				✓					Necessary to design specific services taking the needs and wishes of relevant target groups into consideration. banks to generate revenues by offering value-added, innovative mobile financial services while retaining and even extending their base of technology-savvy customers.
7	Carr (2007)	Mobile Payment Systems and Services: An Introduction	To understand and identify different aspects of mobile banking.	India		✓	✓	✓	✓				✓					Lots of challenges are to be overcome for a successful implementation of mobile payments to be widely accepted as a mode of payment. Businesses, merchants and consumers have to come forward and make value-producing investments. A regulatory framework and widely accepted standards will be the pillars on which mobile payment applications will be built.

8	Mallat (2007)	Exploring Consumer Adoption of Mobile Payments: A Qualitative Study	Qualitative study on consumer adoption of mobile payments	U.S.A			✓	✓	✓	✓		✓					✓	The findings provide foundation for an enhanced theory on mobile payment adoption and for the practical development of mobile payment services.
9	Mas et al (2008)	Banking on Mobiles: Why, How, Whom?	Paper examines how banks can translate the potential of mobile phones into greater financial access for poor people	Pakistan			✓	✓	✓				✓				✓	The mobile banking opportunity will be largest for growth-oriented banks. Mobile banking does not raise any inherently new security issues; still, ensuring adequate security through a combination of technology and operating processes is paramount
10	Gupta (2008)	Internet Banking in India – Consumer Concerns and Bank Strategies	Identifying gaps in knowledge about the consumer's perspective of Internet banking	India	✓			✓		✓			✓		✓			Identified the weaknesses of conventional banking and explores the consumer awareness, use patterns, satisfaction and preferences for Internet banking
11	Khan et al (2009)	Mobile Payments: Their Effect on Purchase Behavior	The mode of payment affects perceptions of money and purchase behavior	New Zealand					✓	✓		✓	✓					Linkage should be ascertained. Such research should necessarily capture perceptions of money as a tangible entity and so a phenomenological approach to data collection is desirable. The identified perceptions should be matched to behavior. Given that the physicality of token money affects the behavior is the key thesis then observation of actual behavior under various payment modes is preferred.
12	Schierz et al (2009)	Understanding Consumer Acceptance of Mobile Payment Services: An Empirical Analysis	Lack of acceptance of mobile payment services among consumers	USA			✓	✓	✓		✓			✓		✓		The empirical results show particularly strong support for the effects of compatibility, individual mobility, and subjective norm. Our study offers several implications for managers in regards to marketing mobile payment solutions to increase consumers' intention to use these services.

13	Kim et al. (2010)	An Empirical Examination of Factors Influencing the Intention to Use Mobile Payment	Author review the relevant literature regarding mobile payment services to identify challenges in mobile banking	Kenya		✓	✓	✓	✓	✓	✓			✓		✓		The fact that innovative late adopters are tech-save and feel confident to use m-payment technologies for their needs. Study will assist managers in implementing appropriate business models and service strategies for different m-payment user groups, allowing them to exert appropriate time, effort, and investment for m-payment system development. Our study also provides directions for future mobile payment related studies.
14	Radcliffe (2011)	Mobile Payments go Viral: M-PESA in Kenya	Avoiding the adverse chicken-and-egg (two-sided market) problems that afflict new payment systems	Kenya				✓	✓	✓			✓					Preexisting country conditions that made Kenya a conducive environment for a successful mobile money deployment. A clever service design that facilitated rapid adoption and early capturing of network effects; and (iii) a business execution strategy that helped M-PESA rapidly reach a critical mass of customers
15	Khan (2011)	Cash or Card: Consumer Perceptions of Payment Modes	Which payment mode they would be using-thus eliminating the transaction costs as a factor in payment mode choice.	Auckland				✓	✓	✓		✓			✓			where consumers access their personal savings to pay for transactions, the mode of payment selected will affect their purchase behavior. Three of the ancillary propositions – that the amount spent and the number of items purchased is less when the cash mode is used and that debit card users are more likely to buy manufacturers labels
16	Ibrahim et al. (2012)	Mobile Banking Adoption: Application of Diffusion of Innovation Theory	Examines a number of factors affecting the mobile banking adoption	Saudi Arabia		✓		✓		✓	✓		✓				✓	Bank's attention should focus on understanding customer behavior and designing reliable mobile banking systems that will meet their needs and provide useful and quality services.

17	Reddy (2012)	A Study on Consumer Perceptions on Security, Privacy & Trust on E-Commerce Portals	Author identifying security, privacy & trust as main issues for use of e-commerce portal	India					✓	✓			✓					Researcher are found that the lack of knowledge of internet privacy and security policies are vague and unclear and most of the consumers are not aware of the technology used for the security of e portals.
18	Ming-Yen Teoh et al. (2013)	Factors Affecting Consumers' Perception of Electronic Payment: An Empirical Analysis	A study aims to discover the factors influencing perception towards electronic payment (e-payment) from the Malaysian consumers' perspective.	Malaysia		✓	✓	✓					✓		✓			Five factors of Consumer perception towards e-payments benefit, self-efficacy, ease of use, security and trust. And Overall, the findings confirm the salience of all of the five factors investigated, allowing practical implications from the perspective of strategies to boost e-payment use to be prescribed. Above all, it suggests that Malaysian banks and online transaction facility providers should continually enhance their e-payment services in view of the promising growth rate.
19	Yaqub et al. (2013)	The Cashless Policy in Nigeria: Prospects and Challenges	Understand the Nigeria banking system and challenges of cash less policy in Nigeria.	Nigeria		✓		✓	✓	✓		✓	✓		✓			Behavioral constraints, Banks attitudes, Lack of confidence, High cost of Internet, High rates of illiteracy are the main factors identified.
20	Abrantes Braga, et al. (2013)	Do Digital Wallets as a Payment Method Influence Consumer in their Buying Behavior?	Paper aims to integrate different constructs related to payment methods and review how they influence consumer behavior.	Brazil	✓		✓	✓	✓	✓			✓		✓			Author proposed 'Payment Mode Influencing Consumer Purchase Model"
21	Jibril et al. (2014)	Mobile Commerce and Security Issues	According to Researcher the issues is security and privacy in m-commerce	Cyprus					✓		✓	✓	✓					Mobile commerce is more tasking than wireless commerce within provider networks. For secure, reliable, better quality efficient m-commerce system, this article has stressed out some essential points to act as directives for better understanding.

22	Wills (2015)	What is the Reason Behind Smart Money's Success in the Philippines?	Researcher Identify the Reason of Smart money success in Philippines.	Philippines		✓	✓	✓					✓					The researcher result said that marketing condition is better like in Philippines a huge community of overseas workers who were continuously sending money back home to support the family, in the form of remittances. and there was a reliable and widespread mobile infrastructure, and a high penetration of mobile devices among consumers.
23	Jeevan (2015)	A Conceptual Study on Customers Adoption of Mobile App Technology in ICICI Bank	Examines consumer adoption model of a new electronic payment service and the factors influencing the adoption of mobile banking in India.	India			✓	✓					✓					It makes the customer to take their privacy in banking activities with the help of innovative Technological solutions. Innovative technologies are upgrade in each and every second towards the changes in customer characteristics and requirement for the effective solutions in business. Therefore, it will improve entire system. The upgrade technologies give easy, secure and safety and also more beneficial to the organizations.
24	Feinstein (2015)	Four Main Challenges in Mobile Payments	Researcher find the challenges as security for one-touch mobile payment apps, cross-platform payment solutions , user adoption is slow , technology	Africa					✓	✓			✓					Tanzania and Uganda close behind – payment service providers are developing platforms and systems to make mobile transactions cheaper, easier, more convenient, and faster, allowing the region the freedom to develop commercially in additional directions.
25	Rathore (2016)	Adoption of Digital Wallet by Consumers	Consumers perceive new technological, factors influence consumers in adoption of digital wallet, risk and challenges.	India		✓	✓	✓					✓		✓			The three major factors which play an important role in consumer adoption are convenience in buying products online, brand loyalty and usefulness of digital wallet.

26	Kumudha1 et al. (2016)	Digital Marketing: Will the Trend Increase in the Post Demonetization Period	This concept paper construed by reviewing articles , news reports, journals and books discusses the aftermath of the process on retail and online shopping	India				✓				✓	✓					According to Researcher Way for a new trend of digital marketing and the implications of the same on online shopping and digital payments and implications on the rural consumer
27	Zand et al. (2016)	The Impact of Electronic Payments on Economic Growth	Impact of card usage on per capita consumption	Canada		✓	✓	✓					✓		✓			Author could extrapolate the effect that the increase in spending on goods and services had on consumption and thereby GDP.
28	Accenture Payment Services (2017)	Influencing Behaviors to Succeed in Everyday Digital Payments	How digital payment service provider to unclear— creating a 'blind spot' around how providers can influence consumer behaviour.	U.K			✓	✓					✓					Our study reveals clear differences between the main behavioral influencers for males and females, with males being far more affected by 'social influence' and 'performance expectancy' than females, and females being more influenced by 'trust' and 'perceived risk' than males
29	Kaur (2017)	Demonetization: Impact on Cashless Payment System	How digital payment is beneficial for consumer?	India	✓	✓								✓				Researcher said that the cashless transition is not only safer than the cash transaction but is less time consuming and not a trouble of carrying and trouble of wear and tear like paper money. It also helps in record of the all the transaction done.
30	Ghosh (2017)	Turning India into a Cashless Economy: The Challenges to Overcome	Lack of confidence while doing a cashless transaction as security is a major issue to study and finding factors influencing.	India	✓	✓		✓		✓	✓		✓		✓			Author has identified the trust and security issues are to be prioritised keeping other factor also in consideration.

Research Gap

Literature review suggests that the study on consumer readiness for digital payment is rapidly emerging in a global context. However, in Indian context, till now, relatively less research has been done in the same field. Thus, a diversified economic, educational and social level research on consumer readiness for digital payment is going to be beneficial for both policy-makers and practitioners, besides contributing to the extant literature.

Section III- Conceptual Framework and Hypotheses Formulation

The conceptual framework for this research is described below (Refer Figure 2). On the basis of the literature review, some salient factors impacting consumer readiness for digital payment have been included in this framework. These factors are classified as enablers and challenges for consumer readiness for Digital Payment.

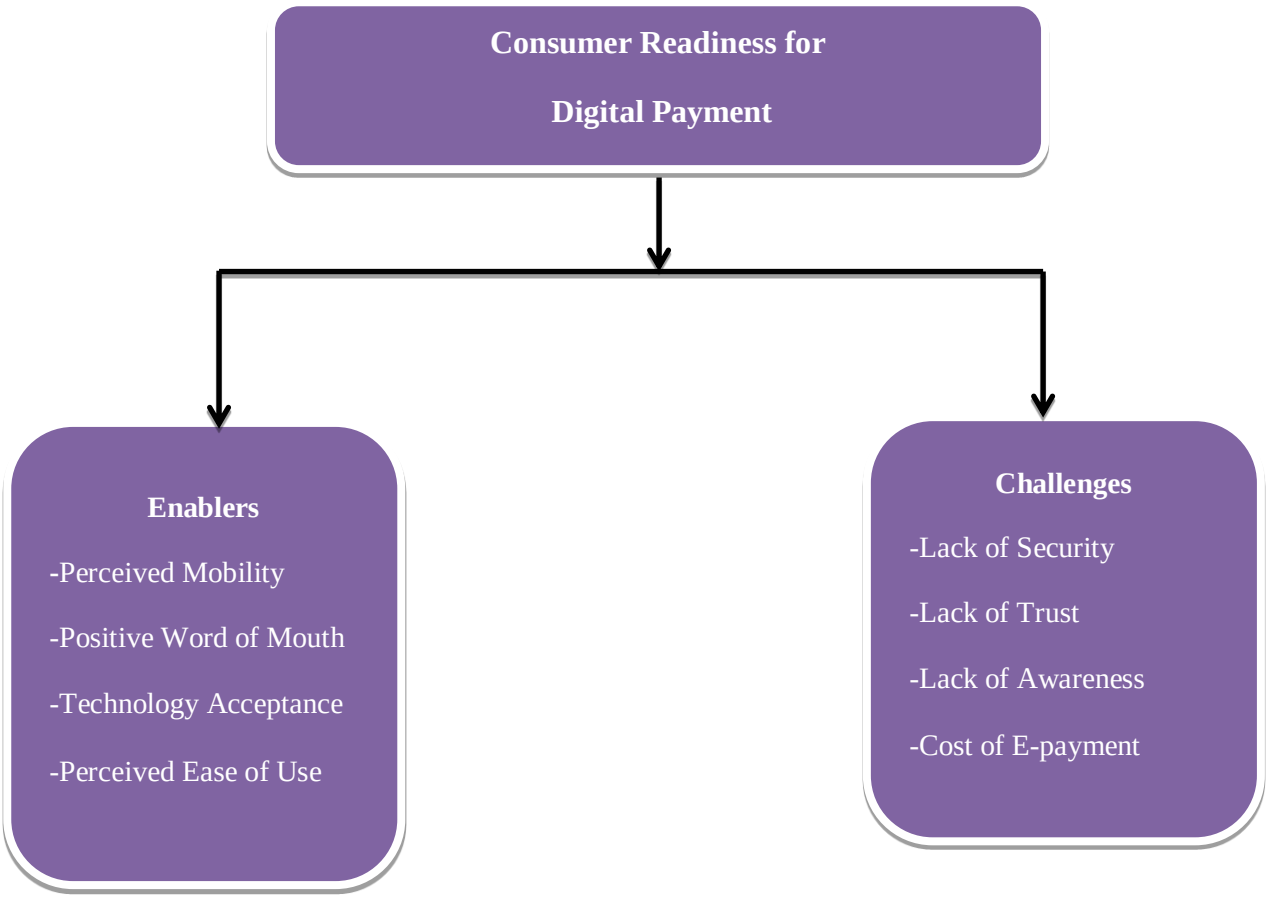

Figure 2: Conceptual Framework (Source: Researcher's own construction)

3.1 Enablers

Ho1: Perceived mobility does not impact consumer readiness for digital payment.

Ha1: Perceived mobility positively impacts consumer readiness for digital payment.

Ho2: Positive word of mouth does not impact consumer readiness for digital payment.

Ha2: Positive word of mouth positively impacts consumer readiness for digital payment.

Ho3: Technology acceptance does not impact consumer readiness for digital payment.

Ha3: Technology acceptance positively impacts consumer readiness for digital payment.

Ho4: Perceived ease of use does not impact consumer readiness for digital payment.

Ha4: Perceived ease of use positively impacts consumer readiness for digital payment.

3.2 Challenges

Ho5: Lack of security does not impact consumer readiness for digital payment.

Ha5: Lack of security negatively impacts consumer readiness for digital payment.

Ho6: Lack of trust does not impact consumer readiness for digital payment.

Ha6: Lack of trust negatively impacts consumer readiness for digital payment.

Ho7: Lack of awareness does not impact consumer readiness for digital payment.

Ha7: Lack of awareness negatively impacts consumer readiness for digital payment.

Ho8: Cost of e-payment does not impact consumer readiness for digital payment.

Ha8: Cost of e-payment negatively impacts consumer readiness for digital payment.

Section IV- An Overview of Proposed Research

4.1 Need of Study

Earlier digital payment had been slowly getting people's attention. But in the last few years, we have witnessed a paradigm shift in the payment system which is largely influenced by growing e-commerce sector, e-wallet services and inclination towards digital payments. A clear picture can be drawn by looking at last few years scenario. Specifically the last two years can be written down as years of awareness because the government's demonetization step has led to drastic growth in awareness regarding digital payment methods and uses. It is observed that consumers, especially youth, are gearing up for the latest technology and are now ready to pay a little extra for convenience and comfort that they can derive from the easy payment format. However some other consumers still may be skeptical in using digital payment methods. In the research, the researcher plans to explore what drives digital payment adoption across demographics and what are the challenges consumers face in digital payment.

These insights are especially valuable for payment service providers to identify and understand the key factors that can influence consumer readiness for digital payment. Young consumers are the key to the future success of digital payments—in some ways, they are the 'gatekeepers' for the mass take-up of this and other new technologies in our society. What works for them now may continue to work in the future for the other demographics. Therefore, it is imperative to study the challenges and enablers of digital payment across the demographics.

4.2 Research Questions

Based on the research gaps identified, the researcher proposes the following questions for the research:

- How digital payment affects consumer buying behavior?
- What are the major challenges in digital payment adoption?
- Why are consumers converting from cash to digital payment?
- How the consumers recognize the relevant payment option for them?
- Which factors facilitate digital payment adoption?

4.3 Research Objectives

The main objectives of this research are:

1: To study the impact of external environment variables in use of digital payment methods.

2: To examine challenges affecting consumer readiness for digital payment.

3: To analyze enablers facilitating consumer readiness for digital payment.

4: To suggest the best possible model of consumer readiness for digital payment in India.

Section V- Methodology of Proposed Research

5.1 Scope of Study

Area of survey: Agra Region.

Target Area: Agra Region comprising Agra, Mathura, Aligarh, Firozabad, Etah and Mainpuri City. (Whole Agra Region)

Total Population: Total population of Agra Region that is 3653152(As per Census 2011 report) (Refer Table 1).

Target Population: Population of Agra region under the age group of 18 to 60 years i.e. 2045764

Category	Age Group	Urban Population of UP (2011)	Age wise Percentage (%) of Urban U.P. Population	Agra city Population	Mathura City Population	Aligarh City Population	Firozabad City Population	Etah City Population	Mainpuri City Population	Total Population of Agra Region
Population		**44495063**	**100**	**1585704**	**349909**	**874408**	**604214**	**118517**	**120400**	**3653152**
Children	0 to 4	3820445	8.59	136212	30057	75112	51902	10181	10342	313806
Children	5 to 9	4699261	10.56	167450	36950	92337	63805	12515	12714	385771
Adolescents	10 to 17	8175174	18.37	291294	64278	160629	110994	21772	22117	671084
Young Adults	**18 to 35**	**14722896**	**33.09**	**524709**	**115785**	**289342**	**199934**	**39217**	**39840**	**1208827**
Mature adults	**36 to 60**	**10194092**	**22.91**	**363285**	**80164**	**200327**	**138425**	**27152**	**27584**	**836937**
Old	61 and above	2433563	5.47	86738	19140	47830	33051	6483	6586	199829
Mixed	Age not stated	449632	1.01	16016	3534	8832	6103	1197	1216	36898

Target Population

Table 1: Urban Population of UP and Agra Region C-13 (Census 2011)

5.2. Sample Size Calculation

For consumers: Taking statistical approach to calculate sample size (*n*) of the infinite

Population, the various quantitative measures to be considered are as follows:

a) Degree of variability of population characteristics or standard deviation (σ)

b) Level of confidence desired or *Z* value

c) Degree of precision desired in estimating population characteristics (*D*)

$$n = \sigma^2 Z^2/D^2$$

"Assuming relative homogeneity of population" Bill Godden Formula

σ = Approximate value of standard deviation of the sample is taken as 1.

Z = Standard normal variation or Z value is taken as 1.96 for 95% confidence level desired

D is taken as 0.1 to ensure high degree of precision.

$n=1^2(1.96)^2 / (0.1)^2 = 384$ **Sample Size = 384**

Region/City	Total Target Population	City wise Target Population Percentage of Total Target Population of Agra Region	City wise Sample Size (As a Percentage of Total Sample Size)	Sample Size of Young Adults*	Sample Size of Mature Adults*
Target Population	**2045764**	**100**	**384**	**227**	**157**
Agra city	887994	43.4	167	99	68
Mathura City	195949	9.6	37	22	15
Aligarh City	489669	24.0	92	54	38
Firozabad City	338359	16.5	63	37	26
Etah City	66369	3.2	12	07	05
Mainpuri City	77424	3.3	13	08	05

Table 2: Total Sample of Agra Region (Census 2011)

**Calculated as per age wise percentage of urban population of UP (Refer Table 1).*

5.3 Sampling Plan

The total population of Agra region is 3653152 which comprise population of Agra, Mathura, Aligarh, Firozabad, Etah and Mainpuri cities. Percentage of population of individual cities is calculated (Refer Table 2) and the entire sample size of 384 is divided as per the calculated percentage. Then the sample of each city is calculated age wise in proportion to the age wise population of U.P as per Census report 2011 (Refer Tables 1 and 2).

5.4 Sampling frame:

The sampling frame for the proposed research is the listing of the respondents in the age bracket of 18-60 in 6 Districts of Agra Region.

5.5 Sample composition

Sample comprises consumers between the age 18-60 years.

5.6 Sampling Technique

Stratified Sampling is used and strata's are segmented on the basis of age.

5.7 Data Collection Instruments

Primary Data Tools: Questionnaires will be used for the survey of consumers.

Secondary Data: Secondary data will be collected from journals, newspapers, books, magazines, internet etc.

5.8 Statistical Techniques for Data Analysis

Descriptive Statistics, Z-test, Regression, Correlation would be used for data analysis.

Section VI: CHAPTERIZATION

The proposed study will contain the following chapters:

• Chapter 1: Introduction

• Chapter 2: Review of Literature

• Chapter 3: Conceptual Framework

• Chapter 4: Research Methodology

• Chapter 5: Data Collection and Analysis

• Chapter 6: Results and Discussions

• Chapter 7: Managerial Implications, Conclusion and Direction for Future Research

• Bibliography and References

• Appendix

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